2.5
2.2
2.0
2.8
3.2
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4.0
4.5
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6.3
7.1
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100 mm
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ABSTRACT

To examine the effects of hearing impairment on the family, questionnaires were completed by 358 mothers and 184 fathers of hearing impaired children enrolled in special education. Questionnaires measured three areas: (1) family stress; (2) communication with the hearing-impaired child; and (3) relationships with professionals and others outside the family. Mean scores of mothers and fathers did not differ significantly on stress factors, although fathers tended to express lower levels. Mothers expressed more confidence in their abilities to communicate with the hearing impaired child. Sex of the child did not significantly affect parents' scores, although child's birth order and age appeared to have substantial effects. Mothers of rubella children had more negative scores than mothers of children with deafness related to other items. Parents using speech plus sign language with their children had less positive scores on all three scales. Tables present the statistical outcomes of the project. (CL)

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Impact of a Child's Hearing Loss on the Family

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Impact of a Child's Hearing Loss on the Family

Kathryn P. Meadow-Orlans

The strong and negative impact of a child's congenital handicap on the family has been a major concern of clinicians and researchers alike. For families with hearing-impaired children, communication difficulties are added to emotional stress, and to the necessity of interacting with many different professionals. This study was designed to examine the nature and strength of this impact in a heterogeneous group of families with hearing-impaired children.

Methodology

Subjects. Parents of 395 hearing-impaired children enrolled in special education programs participated in the project. Of this number, 358 responses from mothers and 184 responses from fathers were useable. They represented 364 different children. Five sources accounted for most of the responses: (1) a county program providing several options for hearing-impaired students from infancy through high school; (2) a residential high school for deaf students in Washington, D.C., drawing from all over the U.S.; (3) a day school in a metropolitan area in the Northeastern part of the U.S.; (4) a residential school in the Midwest; (5) a variety of schools and programs utilizing a parent education consultant from Gallaudet College's "Affiliated Schools Project." Table 1 shows characteristics of participating parents and their children. It shows that the group is broadly representative of major sub-groups of this population, and contains a heterogeneous mix of hearing-impaired children.

Instruments. A two-page questionnaire was distributed for the purpose of collecting background information on the children and their families.

A second questionnaire containing 39 items related to family experiences with a hearing-impaired child was distributed at the same time. Item and factor analyses reduced this original set of items to 24: eight in each of three content areas reflecting "stress," "communication," and "relationships" with professionals and others outside the family. Reliability of these three scales (Cronbach's alpha) was .74, .75, and .71 respectively. Tables 2, 3, and 4 show the eight items included in each of the three scales, plus factor loadings and proportion of "positive" responses.

Results

Mean scores of mothers and fathers did not differ significantly on Scale 1 (Stress), although fathers tended to express lower stress levels ($t = -1.7$; $p < .10$). Mothers expressed more confidence in their abilities to communicate with the hearing-impaired child, compared to fathers ($t = 2.5$; $p < .01$). There were no differences in mothers' and fathers' satisfaction with their relationships with others outside the immediate family. (See Table 5).

Sex of the hearing-impaired child did not affect parents' scores. Although both mothers and fathers of boys achieved more positive scores than did parents of girls, the differences were not significant. Both mothers and fathers of older children (age thirteen and above) felt less positively about their relationships with professionals and others outside the family than did parents of younger children (see Table 6). Also shown in Table 6 is the relationship of the child's birth order to parents'

scores on the three scales. Parents of middle children scored significantly less positively on the communication items compared to parents of both older and younger hearing-impaired children. Fathers of oldest children expressed less stress than did fathers of only or youngest children.

Cause of the child's deafness had little or no influence on fathers' scale scores. However, mothers of rubella children had more negative scores than did mothers of children whose deafness was related to other causes. This relationship was particularly strong for the items related to communication ($F = 4.9$; $p < .001$), quite apparent for items related to relationship with professionals and others ($F = 3.2$; $p < .01$), with a trend in this direction for items related to stress ($F = 2.2$; $p < .10$). (See Table 7). This finding is undoubtedly confounded by the presence of additional handicaps, since Part 2 of Table 7 shows similar relationships between parents' scale scores and the presence of a handicap in addition to hearing loss.

It was found that parents using speech plus sign language with their hearing-impaired children had less positive scores on all three scales, compared to parents using speech only. As shown in Table 8, this relationship disappeared for items relating to stress when degree of hearing loss was controlled. Differences between mothers and fathers of profoundly deaf children are not significant for communication items, but there are significant differences between mothers of less than profoundly deaf children, with those using speech plus sign achieving less positive scores. For items reflecting relationships with professionals, mothers using speech plus sign with their profoundly deaf children achieve scores significantly below those of the three other groups of mothers.

Conclusions

1. It was possible to identify three meaningful clusters of eight items each from the pool of 39 questionnaire items related to the impact of childhood deafness on the family. These sets of items were summarized as: (1) family stress; (2) communication with the hearing-impaired child; (3) relationships with professionals and others outside the family.

2. Generally, the responses of mothers and of fathers to individual items did not differ. Fathers tended to express less stress related to hearing impairment. Fathers showed significantly less satisfaction or comfort in their abilty to communicate with their hearing-impaired child, compared to mothers.

3. Both mothers and fathers of older children evaluated their relationships with professionals less positively than did parents of younger children. Parents of middle children felt their family's communication to be less satisfactory than parents whose hearing-impaired children were first-born, last-born, or only children.

4. Mothers of rubella children and of children with additional handicaps expressed heightened levels of family stress and less satisfaction with communication and with relationships with those outside the family, compared to mothers of children with other etiologies and those without additional handicaps.

5. When scores are evaluated within groups of parents who have profoundly deaf children and those whose children have lesser impairments, no differences were found related to home communication (speech only versus

speech plus sign) on questions related to stress. Mothers who use speech plus sign with their less than profoundly deaf children score below mothers who use speech only on items related to communication. Mothers who use speech plus sign with their profoundly deaf children score below mothers who use speech only on items related to contacts with persons outside the family.

Table 1
Characteristics of Children and Families (N=395)

A. Sex	
Boys	54.5%
Girls	45.5
(N)	(363)

B. Age (in years)	
0 - 3	6.2%
3.1 - 6	13.8
6.1 - 9	16.5
9.1 -12	11.5
12.1 -15	17.4
15.1 -21	34.7
(N)	(357)

C. Cause of Hearing Loss	
Heredity	15.2%
At birth:	
Maternal rubella	22.3
Other	12.1
After birth:	
Meningitis	11.3
Other	8.5
Unknown	30.7
(N)	(355)

D. Age Hearing Loss: (cumulative percents)

	suspected	confirmed	educ.began
by 6 months	32.6%	10.8%	3.8%
by 12 months	50.7	28.9	11.6
by 18 months	68.4	51.0	26.6
by 24 months	85.9	67.1	51.2
by 36 months	93.1	88.9	80.1
by 48 months	96.7	94.2	90.8
(N)	(304)	(343)	(346)

E. Degree of Hearing Loss	
Profound	44.0%
Severe	25.6
Moderate-Severe	14.9
Moderate	10.6
Mild	4.9
(N)	(348)

F. Likes/Wears Hearing Aid	
NO	8.9%
no	16.5
yes	23.5
YES	51.1
(N)	(358)

G. Additional Handicapping Conditions	
None	81.5%
One or more	18.5
(N)	(357)

H. Communication w/ Child at:

	home	school
Speech only	35.6%	24.6%
speech + signs	55.8	67.7
cued speech	5.2	5.4
signs only	2.5	.8
other	.8	1.4
(N)	(362)	(353)

I. Type of Education Program	
Residential	19.3%
Day	29.6
Partial mainstr.	26.1
Mainstreamed	21.0
Home teacher	3.2
Other	.9
(N)	(348)

J. Deaf Relatives	
None	75.0%
Parent(s)	5.6
Sib(s)	7.8
Other(s)	11.7
(N)	(360)

K. Child lives with:	
Both parents	68.3%
Mother only	22.2
Father only	1.6
Adoptive/other	7.8
(N)	(360)

L. Race/Ethnic Background	
Caucasian	79.8%
Black	12.6
Hispanic	3.2
Oriental	2.0
Other	2.4
(N)	(342)

M. Home Language	
English	96.1%
Spanish	2.0
Sign	1.1
Other	.8
(N)	(356)

M. Social Position

Class	Mother	Father
1 (high)	8.3%	14.2%
2	19.8	20.8
3	50.1	40.3
4	17.7	18.6
5 (low)	4.1	6.3
(N)	(339)	(318)

N. Geographical Location	
Massachusetts	17.3%
Maryland	26.4
Other*	56.3
(N)	(371)

*39 states + Guam and Puerto Rico

O. Number of Sibs	
None	13.5%
One	36.1
Two	24.6
Three +	25.7
(N)	(349)

Table 2
Scale 1 - Stress. Items, Factor Loadings, Proportions of Parents with Positive Scores

	Item	Per Cent	(N)
1.	I often regret the extra time our family must devote to the problems of hearing impairment. (.375*)	85%	(527)
2.	We have more family arguments about our hearing-impaired child than we have about other things. (.618*)	81	(471)
3.	Much stress in my family is related to deafness/ hearing impairment. (.624*)	83	(521)
4.	My hearing-impaired child's behavior has often been a source of worry to me. (.401*)	59	(524)
5.	Family and friends usually treat my hearing-impaired child the same as they would treat a hearing child of the same age. (.386*)	73	(523)
6.	Because of hearing loss, it was (is) necessary for me to forget many hopes and dreams that I had for my child. (.470*)	79	(522)
7.	In the preschool years, my child's hearing loss created so many demands that I never had time for myself. (.449*)	73	(514)
8.	Parents of hearing-impaired children are expected to do too many things for them. This has been a burden for me. (.402*)	76	(518)

reliability (Cronbach's alpha) = .74

* factor loading

Table 3
Scale 2 - Communication. Items, Factor Loadings, Proportions of Parents with Positive Responses

Item	Per Cent	(N)
1. I can feel proud of the way I have responded to the special needs of my hearing-impaired child. (.475*)	89%	(525)
2. My communication skills are quite adequate for my child's needs. (.554*)	60	(522)
3. I wish I could communicate as well with my hearing-impaired child as I do with (my) hearing child(ren). (.536*)	32	(461)
4. I wish some of the other members of my family could communicate more easily with my hearing-impaired child. (.374*)	30	(529)
5. I tend to treat my hearing-impaired child like a child who is a good deal younger. (.373*)	63	(529)
6. My hearing-impaired child is often left out of family conversations because of communication problems. (.540*)	48	(524)
7. I feel confident that my hearing-impaired child can handle most situations as well as a hearing child. (.365*)	72	(521)
8. There are many things I can't seem to communicate to my hearing-impaired child. (.554*)	50	(527)

reliability (Cronbach's alpha) = .75

* factor loading

Table 4
Scale 3 - Relationships with Professionals and Others.
Items, Factor Loadings, Proportions of Parents
with Positive Responses

Item	Per Cent	(N)
1. Differing opinions from professionals have made it hard for me to make decisions about schooling for my hearing-impaired child. (.470*)	60	(523)
2. I feel satisfied with the educational progress of my hearing-impaired child. (.398*)	67	(526)
3. I have had a lot of good professional advice about my hearing-impaired child's education. (.491*)	64	(515)
4. Sometimes my friends and neighbors have been thoughtless or cruel about my child's hearing impairment. (.304*)	70	(526)
5. Many times I have been angry because of the way professionals treated me as the parent of a hearing-impaired child. (.578*)	64	(520)
6. I have no regrets about the educational opportunities that have been available to my hearing-impaired child. (.587*)	62	(523)
7. It was really hard to find a doctor who could tell us that our child has a hearing loss. (.356*)	62	(512)
8. It is frustrating for me as a parent to have so many different opinions among professionals who work with hearing-impaired children. (.465*)	32	(514)

reliability (Cronbach's alpha) - .71

* factor loading

Table 5
MEAN SCORES OF MOTHERS AND FATHERS, SCALES I, II, III

Scale	Mean Score	t
I. Stress		
Mothers	6.2	-1.7+
Fathers	6.4	
II. Communication		
Mothers	4.9	2.5**
Fathers	4.6	
III. Relationships w/ Professionals and Others		
Mothers	4.7	-1.1
Fathers	4.8	

Table 6
RELATIONSHIP OF PARENTS' SCALE SCORES TO (1) CHILD'S AGE AND (2) BIRTH ORDER

Grp	Age	Stress		Communication		Profess'als	
		Mo	Fa	Mo	Fa	Mo	Fa
1	Under 6 yrs.	6.0	6.6	4.4	4.5	5.3	5.9
2	6 to -10 yrs.	5.6	6.3	4.8	5.5	5.3	4.9
3	10 to -13 yrs.	6.0	6.2	4.0	4.5	4.6	5.5
4	13 to -16 yrs.	5.9	6.3	4.7	4.5	4.4	4.6
5	16+ yrs.	6.2	6.5	4.3	4.1	4.5	4.4
	F	n.s.	n.s.	n.s.	2.0+	3.05*	2.44*
	grp diff	-	-	-	5<2	4,5<1,2	4,5<1
1	Only	6.0	6.8	5.3	5.3	4.7	5.0
2	Oldest	5.7	5.7	4.4	4.2	4.5	4.5
3	Youngest	6.0	6.9	4.7	5.0	5.0	5.1
4	Middle	6.1	6.3	3.8	3.8	4.9	4.7
	F	n.s.	4.14**	4.89**	3.33*	n.s.	n.s.
	grp diff	-	2<1,3	4<1,3 2<1	4<1,3	-	-

Table 7
RELATIONSHIP OF PARENTS' SCALE SCORES TO (1) CAUSE OF DEAFNESS AND (2) PRESENCE OF ADDITIONAL HANDICAPS

Grp	Cause	Stress		Communication		Profess'als	
		Mo	Fa	Mo	Fa	Mo	Fa
1	Rubella	5.6	6.4	3.7	4.0	4.1	4.3
2	Other Prenatal	5.6	6.8	4.5	4.8	4.6	5.0
3	Heredity	6.5	6.2	5.4	5.6	5.1	4.8
4	Post natal	5.8	6.6	4.5	4.8	5.1	5.0
5	Unknown	6.1	6.3	4.6	4.3	5.1	5.0
	F	2.2+	n.s.	4.9***	2.3+	3.2**	n.s.
	grp diff	1<3		1<2,3,4,5	1,5<3	1<3,4,5	
Add'l h'caps							
None		6.1	6.4	4.7	4.6	5.0	4.6
One or more		5.2	6.6	3.6	4.0	4.3	5.8
	t	2.8**	n.s.	3.7***	n.s.	2.0*	-2.2*

Table 8
RELATIONSHIP OF PARENTS' SCALE SCORES TO SEVERITY OF CHILD'S HEARING LOSS, BY HOME COMMUNICATION MODE

Grp		Stress		Communication		Profess'als	
	Profound loss	Mo	Fa	Mo	Fa	Mo	Fa
1	Speech only	6.3	6.2	4.5	4.4	5.2	4.8
2	Speech + sign	5.9	6.3	4.0	3.7	4.0	4.0
	< Profound loss						
3	Speech only	6.2	6.6	5.2	5.0	5.2	5.2
4	Speech + sign	5.7	6.2	4.6	4.3	5.1	4.8
	F	2.2+	n.s.	6.0***	3.2*	5.6***	2.4+
	grp diff	n.s.	-	2,4<3	2<3	2<1,3,4	2<3

(Profound loss = > 90 dB)

+ $p \leq .10$ ** $p \leq .01$
* $p \leq .05$ *** $p \leq .001$